Evaluation and Certification of Revised SRD

This revision involves the modification of a standard previously identified in the approved SRD, specifically ISMP section 3.3.3, which is cited as an implementing standard to SRD Vol. II Safety Criterion 9.0-4. This change will allow BNFL Inc. to proceed with implementation of certain changes during the design and construction phases at its own risk pending completion of safety documentation, including safety evaluations and, when Regulatory Unit approval is required, requests to amend the Authorization Basis.

An evaluation that demonstrates that the SRD will continue to identify a set of standards that will provide adequate safety, comply with all applicable laws and regulations, and conform to top-level safety standards is required. This determination must be certified.

Description of Revision

This revision contains two types of changes to ISMP section 3.3.3:

1. Changes to the existing Authorization Basis (AB) maintenance process required to conform with Revision 6 of RL/REG-97-13, other than those involved with decisions to deviate from the AB
2. Decisions to deviate from the AB (i.e., the "proceed-at-risk" process).

Authorization Basis Maintenance Changes Required to Conform with RL/REG-97-13, Rev.6 (Other than "Proceed at Risk")

1. Definition of "Changes"

Changes the definition of "Changes" to apply to changes to the "facility" and "administrative controls," as follows:

- Included within the scope of "Changes" are those items that may not be explicitly described in the authorization basis, but where Changes would cause a deviation from commitments contained in the authorization basis.
- "Facility" refers to the physical facility, the hazards and safety analysis of the facility, and the work at the facility that is enveloped by the analyses. The facility is described in the authorization basis by information such as the site description, design information, hazard analysis information, safety analysis information, and descriptions of facility operations, tests, and experiments.
- "Administrative controls" refers broadly to the management and administrative processes associated with managing, designing, building, or operating the facility. Administrative controls are described in the authorization basis by information such as the descriptions of procedures, programs, plans, and management processes.

2. Written Evaluations of AB Revisions

For all Authorization Basis revisions (not just those related to modification or deletion of a standard cited in the SRD), the written evaluation must demonstrate that the revision:

- Will continue to comply with all applicable laws and regulations, conform to top-level safety standards; and provide adequate safety
- Will continue to conform to the original submittal requirements associated with the authorization basis document(s) affected by the revision

- Will not result in inconsistencies with other commitments and descriptions contained in authorization basis or an authorization agreement.

Deviations from Authorization Basis ("Proceed at Risk" Changes)

During the design and construction phase prior to the Start of Cold Testing, BNFL Inc. may implement design changes that deviate from the Authorization Basis, provided that the provisions of paragraphs 1, 2, and 3 below are met.

1. Evaluation

Prior to implementing a change that deviates from the Authorization Basis, BNFL Inc. will perform an evaluation that determines that:

a. the change complies with applicable laws and regulations, conforms with top-level safety standards, and satisfies the SRD Safety Criteria, and

b. the specific changes will not cause or threaten imminent danger to the workers, the public, or the environment from radiological, nuclear or chemical hazards.

2. Documentation of Decision to Deviate from the Authorization Basis

Documentation of BNFL Inc.'s decision to deviate from the Authorization Basis will include the following:

a. Identification of the specific changes to be implemented

b. Identification of the specific deviation(s) from the Authorization Basis

c. The evaluation described in paragraph 1

d. The signature of the manager(s) having the authority to approve changes that deviate from the Authorization Basis and the date such changes were approved.

3. Time Limits and Notification

a. If prior approval by the Regulatory Official is not required, BNFL Inc. will revise the Authorization Basis within 30 days following the decision to deviate from the Authorization Basis (as recorded in 2.d above).

b. During the construction phase, if prior approval by the Regulatory Official is required, BNFL Inc. will notify the Regulatory Official (or his designee):

   1) either verbally or in writing within 24 hours of the decision to deviate from the Authorization Basis (as recorded in 2.d above), and

   2) in writing within 72 hours of the decision to deviate from the Authorization Basis (as recorded in paragraph 2.d above). This notification will include a copy of the documentation of the decision to deviate from the Authorization Basis described in paragraph 2 above.

c. If prior approval by the Regulatory Official is required:

   1) BNFL Inc. will submit a request to amend the Authorization Basis to the Regulatory Unit within 30 days following the decision to deviate from the Authorization Basis (as recorded in 2.d above).

2) If provision 3.c.1) is not met, or if approval of the amendment request is not obtained within 90 days of the decision to deviate from the Authorization Basis (as recorded in paragraph 2.d above):

   a) All physical work associated with implementing the change that deviates from the Authorization Basis will stop, and

   b) Corrective action will be initiated immediately, in accordance with paragraph 4 below.

d. All deviations from the Authorization Basis will be resolved prior to the Start of Cold Testing.

4. Tracking of Deviations from the Authorization Basis

Changes that deviate from the Authorization Basis will be entered into the project's Corrective Action Management System (CAMS) as a condition adverse to quality, as described in the QAPIP. If the provisions of paragraph 3.c.2) are invoked, the change will be recorded as a significant condition adverse to quality, and corrective action will be tracked to completion.

Evaluation

Authorization Basis Maintenance Changes Required to Conform with RL/REG-97-13, Rev.6 (Other than "Proceed at Risk")

Definition of "Changes"

The revisions to the definition of "Changes" are made for two reasons:

1. The process for deviations from the AB applies only to changes to the "facility" but not to administrative controls. The evaluation related to deviations from the AB is provided in the following section.
2. The scope of the term "facility" has been broadened to account for changes that apply not only to design but also to other aspects of the facility, such as the physical as-constructed plant and the associated hazard and accident analyses. These revisions ensure that evaluations of Changes will address all possible impacts on safety.

These changes do not impact compliance with applicable laws and regulations or conformance with top-level safety standards.

Written Evaluations of AB Revisions

This part of the revisions to ISMP section 3.3.3 ensures that AB revisions either meet the specified provisions or are submitted to the Regulatory Official for approval of an AB amendment. Previously, an evaluation that demonstrates adherence to the "safety triad" was only required if the revision involved deletion or modification of a standard in the approved SRD. This revision imposes the "safety triad" evaluation on all AB revisions. Therefore, this part of the revision enhances safety.

This part of the revision to the ISMP also requires an evaluation to determine whether the AB revision will continue to conform to the original submittal requirements associated with the affected authorization basis document(s) but will not result in inconsistencies with other commitments and descriptions contained in the authorization basis or an authorization agreement. These new requirements ensure that BNFL Inc. will not unilaterally approve a change that

violates the basis for the current authorization by the Regulatory Unit. This part of the revision, therefore, also enhances safety.

Neither of these revisions impact regulatory compliance or conformance with top-level safety standards.

Deviations from Authorization Basis ("Proceed at Risk" Changes)

Adequate Safety

Safety Criterion: 9.0-4 states:

> "Material that is part of the authorization basis shall be established, documented, and submitted to the Director of the Regulatory Unit for evaluation and in support of decisions and regulatory oversight. The material shall be maintained current with respect to changes made to the facility design and administrative controls and in the light of significantly new safety information."

ISMP section 3.3.3, "Changes to Safety Documentation," is cited as an implementing standard to this Safety Criterion. ISMP section 3.3.3 describes the process of determining whether a change requires prior approval by the Regulatory Unit (RU) and the process for requesting RU approval of those changes that do require approval. BNFL Inc.'s proposal to proceed at risk with certain changes that require Regulatory Unit approval applies only to the design and construction phases prior to the Start of Cold Testing, which is defined as that point in the construction phase of each facility of the RPP-WTP during start-up testing but prior to admitting any significant quantities of radioactive waste or process chemicals into the facility. This milestone will be established in the Construction Agreement. Thus, such changes would only be permitted prior to the introduction of significant radiological, nuclear or process hazards to the RPP-WTP.

In deciding to proceed with such changes, BNFL Inc. assumes the financial risk (i.e., the cost of rework or any other adverse condition arising from the interim implementation).[1]

BNFL Inc.'s Authorization Basis Maintenance program, described in this ABAR, also will eliminate or minimize the following types of risk, as discussed further below.

a) Regulatory risk (i.e., the possibility that the Regulatory Unit will not be cognizant of the current status of the RPP-WTP's alignment with the AB)

b) Safety risk (i.e., the physical risk from nuclear, radiological or process chemical hazards)

c) Programmatic risk (i.e., the potential for failure to meet schedule milestones in the Tri-Party Agreement or the Contract).

With respect to regulatory risk, the notification requirements that pertain to the construction phase ensure that the RU is aware of all decisions to deviate from the AB within 24 hours and that the RU receives the detailed documentation that justified the decision within 72 hours. CAMS will be used to track closeout of deficiencies related to deviations from the AB and to focus management attention on the need to complete timely revision of the AB, thus ensuring that the duration for which the change lacks formal approval will be minimized. CAMS will also be used for trending purposes, thus ensuring that potential programmatic issues related to deviations from the AB are

[1] BNFL Inc. will resolve any contractual issues related to BNFL Inc.'s assumption of financial risk for such changes with the DOE Office of River Protection; hence, the scope of BNFL Inc.'s assumption of financial risk, as it relates to the TWRS Privatization Contract No. DE-AC06-96RL13308 is not addressed in this ABAR.

identified and resolved. RU inspectors will be able to review the CAMS, such that they will be knowledgeable of any temporary misalignments between the as-built facility and the AB. The CAMS can also be used to provide reports, upon RU request, of the current status of all AB deviations.

QAPIP Rev. 5 section 3.2.2 states, in part: "…[A] condition adverse to quality shall be documented, entered into the CAMS, and managed to disposition and closure of the identified condition in a timely manner. All identified conditions adverse to quality shall be documented and reported to management responsible for the condition, their upper management, and to the quality assurance organization for tracking. Remedial actions for non-significant conditions adverse to quality and corrective actions shall be tracked on the CAMS database and the completion verified. Follow-up of completed corrective actions for effectiveness shall be through surveillance, assessment, or audit by the QA Manager."[2]

In addition, the duration of an "at-risk" condition will be minimized by expediting preparation of Authorization Basis changes. BNFL Inc. will complete the AB change documentation (including the safety evaluation, and, if RU approval is required, request to amend the Authorization Basis) within 30 days of its decision to deviate from the AB. The 30-day requirement for issuance of AB change documentation will be highlighted in the CAMS tracking system to ensure appropriate management attention. For those cases where the completion dates are not met, BNFL Inc. will expedite its corrective actions, as tracked by the CAMS. Similarly, if the Regulatory Official disapproves the request to amend the AB or fails to approve the amendment request within 90 days, the CAMS will ensure prompt identification and implementation of any needed corrective actions, including potential rework. In either case, all physical work that deviates from the AB will stop immediately. Furthermore, BNFL Inc. proposes to close any open "at-risk" changes prior to the Start of Cold Testing, which is that point in the construction phase of each facility of the RPP-WTP during start-up testing but prior to admitting any significant quantities of radioactive waste or process chemicals into the facility. Therefore, the AB will be fully aligned with the as-designed, as-built facility well in advance of production operations, so the Regulatory Unit will be fully apprised of all changes that impact the AB prior to issuance of the Production Operations Authorization.

Therefore, since (1) the RU will receive prompt notification of decisions to deviate from the AB, (2) associated AB revisions will be expedited, (3) AB deviations will be tracked by the Corrective Action Management System (CAMS), (4) CAMS will be capable of providing reports so that the status of the AB can be ascertained, and (5) all open actions related to such changes will be closed out well in advance of the Production Operations Authorization, "regulatory risk" is eliminated.

The physical risk of an accident involving radiological, nuclear or process chemical hazards occurring during design or construction is very low.[3] BNFL Inc.'s proposed AB maintenance program will require that all open actions related to changes that will deviate from the AB be closed prior to introduction any significant quantities of radioactive waste or process chemicals into any RPP-WTP facility. Furthermore, the proposed AB revision requires that an evaluation be performed that determines that:

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[2] QAPIP Rev. 5 was approved by the Regulatory Unit contingent on BNFL Inc.'s modifying the ISMP as necessary to reflect the changes to the QAPIP. BNFL Inc. submitted its proposed changes to the ISMP reflecting the changes to the QAPIP in an Authorization Basis Amendment Request (ABAR-W375-00-00010, Rev. 0) on March 20, 2000 (CCN #012280).

[3] During construction prior to Cold Testing, there is a potential of encountering existing site hazards, such as contaminated soil.

- the change complies with applicable laws and regulations, conforms with top-level safety standards, and satisfies the SRD Safety Criteria, and
- the specific changes will not cause or threaten imminent danger to the workers, the public, or the environment from radiological, nuclear or chemical hazards.

Therefore, "safety risk" will be minimal.

"Programmatic risk" is not a concern under this proposal for the following reasons. First, as described above, only those changes that satisfy the stated criteria will be approved by BNFL Inc. management to be implemented on an at-risk basis. Second, the management controls described above to minimize the duration of a proceed-at-risk condition will likewise minimize the possibility of schedule delays. Most importantly, allowing certain changes to be implemented pending AB revision will actually prevent project schedule delays resulting from the need to hold up work until safety documentation is prepared, reviewed internally, submitted to the RU, and reviewed and approved by the RU.

Given that the risk of an accident involving radiological, nuclear or process chemical hazards occurring during design or construction is unchanged by this revision, this change maintains adequate safety.

Compliance with All Applicable Laws and Regulations

There are no applicable laws or regulations governing maintenance of the Authorization Basis (other than the Quality Assurance Plan and the Radiation Protection Plan) during design and construction.

Conformance to Top-Level Safety Standards

Overall principle 4.1.3, "Authorization Basis," of DOE/RL-96-0006[4], Rev. 1, *Top-Level Radiological, Nuclear and Process Safety Standards and Principles for TWRS Privatization Contractors*, U.S. Department of Energy, Richland Operations Office, July 1998, states:

> "Material that is part of the authorization basis should be established, documented, and submitted to the Director of the Regulatory Unit for evaluation and in support of decisions and regulatory oversight. The Contractor should maintain the material current with respect to changes made to the facility design and administrative controls and in the light of significantly new safety information."

Adoption of this revision will maintain conformance to top-level principle 4.1.3 for the following reasons: BNFL Inc.'s proposed AB Maintenance program includes short-term (24-hour) notification and reporting requirements (72-hour) of decisions to temporarily deviate from the AB. When RU approval of the change is required, the program requires that a request to amend the Authorization Basis be submitted within 30 days. The AB Maintenance program also includes management controls to ensure that the AB revision is captured and tracked to completion. These provisions ensure that material that is part of the AB is "current" within the time frames described.

General process safety principle 5.2.9, "Management of Change," states:

[4] DOE/RL-96 -0006, Rev. 1, *Top-Level Radiological, Nuclear and Process Safety Standards and Principles for TWRS Privatization Contractors*, U.S. Department of Energy, Richland Operations Office, July 1998

> "The Contractor should evaluate all planned changes involving the technology of the process and the facility design and operation in order to ensure that the impact on safety is analyzed and acceptable and to determine the need for modifications to operating procedures. The Contractor should establish and implement written procedures to manage changes to process chemicals, technology, equipment, and procedures; and changes to facilities. These procedures should address the technical basis for the proposed changes, impact of the changes on process safety, modification of the operating procedures, the schedule for proposed changes, and authorization for proposed changes."

BNFL Inc.'s proposed implementation of changes "at risk" conform to this principle, because nothing in this proposal alters the processes of evaluating planned changes; only the timing of such evaluations and their authorization (when required) is proposed to be allowed to be deferred temporarily in certain instances.

Certification

The SRD continues to identify a recommended set of standards that, when properly implemented, will provide adequate safety, comply with all applicable laws and regulations, and conform to top-level safety standards.

Certification that the SRD identifies a set of standards that continues to provide adequate safety, complies with all applicable laws and regulations, and conforms to top-level safety standards is based on adherence to the DOE/RL-96-0004 standards identification process and successful completion of review and confirmation by the PSC.

RPP-WTP General Manager Date